Adding Big Data Open Educational Resources to the ONC Health IT Curriculum

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The overall goal of this project is to develop open educational resources for use in courses, programs, and related activities in Big Data to Knowledge (BD2K). The focus of the materials will be at the advanced introductory level, including such people as beginning informatics graduate students, established investigators and senior trainees seeking to learn more about data science to expand their research programs, advanced undergraduates exploring future career paths into data science, and established professionals who would benefit from knowledge of the application of BD2K concepts. The content developed will use the same format as the highly successful Office of the National Coordinator for Health IT (ONC) curriculum materials. The development of the materials was led by Oregon Health & Science University (OHSU) and four other universities, with support and dissemination led by OHSU. The PI of this proposal served as one of five PIs leading the development of content as well as lead for the ONC National Training and Dissemination Center (NTDC) that provided support and Web-based dissemination of the materials. The value of using the ONC Health IT Curriculum approach includes an open format that provides both "out of the box" content as well as the source materials for that content. This will also provide us the ability to map content from the new BD2K materials back to other content in the ONC curriculum, such as structure and function of the health care system, basic computer and information science, standards and interoperability, electronic health records, and project management and leadership. It will also enable us to build on the foundation of the ONC materials to emphasize the value of Big Data and analytical approaches in clinical and translational research. Finally, it will allow us to draw on the experience and leadership of OHSU and others who contributed to developing, evaluating, and disseminating the curricular content. In the project, we will carry out a needs assessment of a wide variety of potential BD2K users to refine our initial views on what should be part of a curriculum, develop and disseminate the curricular materials using the ONC curriculum format, evaluate the materials with all major user groups, build a community of users of the materials who can participate in evaluation and provide other feedback. We will repeat the cycle of needs assessment, development and dissemination, and evaluation for two 18-month periods. PUBLIC HEALTH RELEVANCE: This project will create open educational materials in Big Data and related sciences. While comparable in quantity to a year-long advanced introductory course, the modular framework will allow many possible uses and users of the content. We will use the format of the ONC Health IT Curriculum, which will allow our materials to build on and link back to other topics in biomedical and health informatics. The materials will benefit students established investigators, and others who need knowledge and skills in Big Data to establish and/or advance careers in a variety of disciplines.